

CLAIMS:

1. Antenna arrangement comprising a first antenna element with a first operational frequency and a second antenna element with a second operational frequency characterized in that the first antenna element is a director for the second antenna and that the second antenna is a reflector for the first antenna.

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2. Antenna arrangement as claimed in claim 1 characterized in that the first antenna element is a mono-pole antenna.

3 Antenna arrangement as claimed in claim 1 or 2

10 characterized in that the second antenna element is a mono-pole antenna.

4. Antenna arrangement as claimed in claim 3 when combined with claim 2, characterized in that the first antenna element is a quarter wavelength antenna element and the second antenna element is a quarter wavelength antenna element.

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5. Antenna arrangement as claimed in claim 4, characterized in that the distance between the first antenna element and the second antenna element is approximately one quarter wavelength of the first operational frequency.

20 6. Transceiver comprising an antenna arrangement as claimed in claim 1, 2, 3, 4 or 5.

7. Transceiver as claimed in claim 6 characterized in that the transceiver comprises a second antenna arrangement identical to the now first antenna arrangement.

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8. Transceiver as claimed in claim 7 characterized in that the transceiver is arranged to use the first antenna arrangement and the second antenna arrangement for antenna diversity.

9. Transceiver as claimed in claim 7
characterized in that the transceiver is arranged to use the first antenna arrangement and the
second antenna arrangement for beam steering.

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10. Transceiver as claimed in claim 6
characterized in that the first antenna arrangement and the second antenna arrangement are
arranged such that the antenna elements are all comprised in a plane, that the antenna
elements of each antenna arrangement are parallel to the other antenna elements in the
10 antenna arrangement and that the first antenna arrangement is placed at an angle between 20
and 60 degrees to the second antenna arrangement.

CLAIMS:

1. Antenna arrangement comprising a first antenna element (5, 10) with a first operational frequency and a second antenna element (4, 9) with a second operational frequency
characterized in that the first antenna element (5, 10) is a director for the second antenna and
5 that the second antenna (4, 9) is a reflector for the first antenna.
2. Antenna arrangement as claimed in claim 1
characterized in that the first antenna element (5, 10) is a mono-pole antenna.
- 10 3. Antenna arrangement as claimed in claim 1 or 2
characterized in that the second antenna element (4, 9) is a mono-pole antenna.
4. Antenna arrangement as claimed in claim 3 when combined with claim 2,
characterized in that the first antenna element (5, 10) is a quarter wavelength antenna element
15 and the second antenna element (4, 9) is a quarter wavelength antenna element.
5. Antenna arrangement as claimed in claim 4,
characterized in that the distance between the first antenna element (5, 10) and the second
antenna element (4, 9) is approximately one quarter wavelength of the first operational
20 frequency.
6. Transceiver (1, 6, 20, 30) comprising an antenna arrangement as claimed in
claim 1, 2, 3, 4 or 5.
- 25 7. Transceiver (20) (30) as claimed in claim 6
characterized in that the transceiver (20) (30) comprises a second antenna arrangement (27,
28) (36, 33) identical to the now first antenna arrangement (25, 26) (34, 35).
8. Transceiver (20) (30) as claimed in claim 7

characterized in that the transceiver (20) (30) is arranged to use the first antenna arrangement (25, 26) (34, 35) and the second antenna arrangement (27, 28) (36, 33) for antenna diversity.

9. Transceiver (20) (30) as claimed in claim 7

5 characterized in that the transceiver (20) (30) is arranged to use the first antenna arrangement (25, 26) (34, 35) and the second antenna arrangement (27, 28) (36, 33) for beam steering.

10. Transceiver as claimed in claim 6

10 characterized in that the first antenna arrangement (25, 26) (34, 35) and the second antenna arrangement (27, 28) (36, 33) are arranged such that the antenna elements are all comprised in a plane, that the antenna elements of each antenna arrangement are parallel to the other antenna elements in the antenna arrangement and that the first antenna arrangement (25, 26) (34, 35) is placed at an angle between 20 and 60 degrees to the second antenna arrangement (27, 28) (36, 33).